Roland®

SuperNATURAL Expansion Board

ARX-03

BRASS

Owner's Manual

Before using this product, carefully read the sections entitled: "USING THE UNIT SAFELY" and "IMPORTANT NOTES" (p. 4; p. 6). These sections provide important information concerning the proper operation of the product. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new product, Owner's manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.

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INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

About ⚠WARNING and ⚠CAUTION Notices

⚠WARNING	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
⚠ CAUTION	Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. * Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.

About the Symbols

⚠	The △ symbol alerts the user to important instructions or warnings.The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger.
	The ⃠ symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the unit must never be disassembled.
	The ● symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power-cord plug must be unplugged from the outlet.

ALWAYS OBSERVE THE FOLLOWING

⚠WARNING

- Do not open or perform any internal modifications on the product.

⚠WARNING

- Do not open or perform any internal modifications on the product. (The only exception would be where this manual provides specific instructions which should be followed in order to put in place user-installable options; see p. 8.)

⚠ WARNING

- Do not attempt to repair the product, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

- Never install the product in any of the following locations.
  - Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are
  - Damp (e.g., baths, washrooms, on wet floors); or are
  - Exposed to steam or smoke; or are
  - Subject to salt exposure; or are
  - Humid; or are
  - Exposed to rain; or are
  - Dusty or sandy; or are
  - Subject to high levels of vibration and shakiness.

- In households with small children, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the product.

⚠ WARNING

- Protect the product from strong impact.
  (Do not drop it!)

- Before installing the ARX-03, you must first always turn off the (Fantom-G6/G7/G8, Cakewalk VS-700R) and unplug its power cord.

⚠ CAUTION

- Install the circuit board only into the specified product (Fantom-G6/G7/G8, Cakewalk VS-700R). Remove only the specified screws during the installation.

IMPORTANT NOTES

When you purchase the ARX-03 SuperNATURAL Expansion Board from an authorized Roland dealer, the included sounds and samples are licensed, not sold, to you by Roland Corporation, for commercial use in music production, public performance, broadcast, etc.

You may use any of the included phrases and/or samples in a commercial or non-commercial recording without paying any additional license fees. However, you must strictly adhere to the following crediting guidelines on any music recording that utilize material from ARX-03.

Reproduction or duplication of this collection or any of the sound recording contained in the ARX-03, either as they exist on this expansion board or by any means of reformatting, mixing, filtering, re-synthesizing, processing or otherwise editing for use in another product or for re-sale, is strictly prohibited without the express written consent of Roland. All unauthorized giving, trading, lending, renting, re-issue, redistribution or re-sale of the sounds included in the ARX-03 are expressly prohibited.

In Plain English: Be creative in your application of the ARX-03 sounds, and keep this library for your use only. DO NOT COPY IT.

Roland constantly monitors other Soundware releases to check for copyright infringements, and will prosecute all piracy and copyright violations to the fullest extent of the law.

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Placement

- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.

Additional Precautions

- To avoid disturbing your neighbors, try to keep the product's volume at reasonable levels (especially when it is late at night).
- When you need to transport the product, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials.
- MMP (Moore Microprocessor Portfolio) refers to a patent portfolio concerned with microprocessor architecture, which was developed by Technology Properties Limited (TPL). Roland has licensed this technology from the TPL Group.

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Installing the Expansion Board in Your Product

Cautions when installing

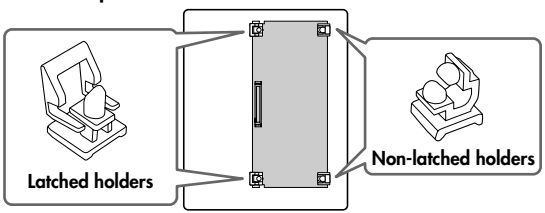
- Before you install this expansion board (hereafter referred to as "the board"), you should carefully read the procedure for installing expansion boards given in the owner's manual of the product in which you're installing it.
- To avoid the risk of damage to internal components that can be caused by static electricity, please carefully observe the following whenever you handle the board.
  - Before you touch the board, always first grasp a metal object, so you are sure that any static electricity you might have been carrying has been discharged.
  - When handling the board, grasp it only by its edges. Avoid touching any of the electronic components or connectors.
  - Save the bag in which the board was originally shipped, and put the board back into it whenever you need to store or transport it.
- Do not touch any of the printed circuit pathways or connection terminals.
- Never use excessive force when installing a circuit board. If it doesn't fit properly on the first attempt, remove the board and try again.
- When circuit board installation is complete, double-check your work.

Installation in Your Product

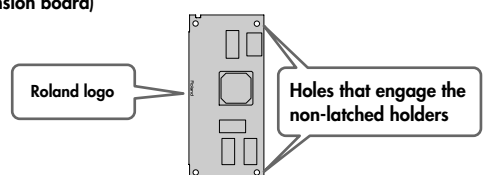
1. As described in your product's owner's manual, expose the slot in which the expansion board is to be installed.

2. Orient the board with the slot of your product as shown in the illustration.

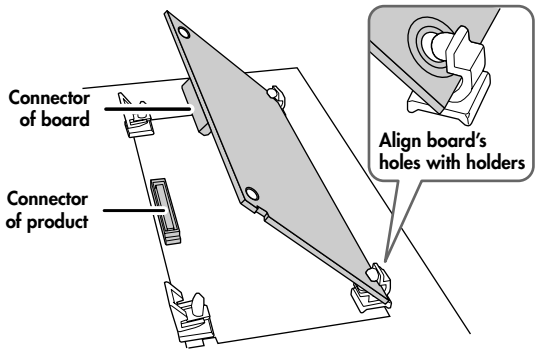
Slot of the product

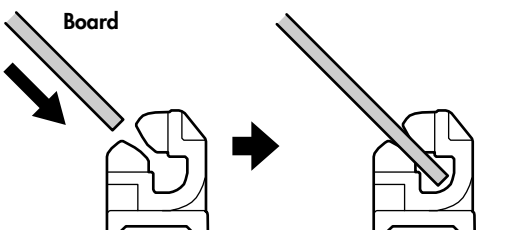


Board
(expansion board)

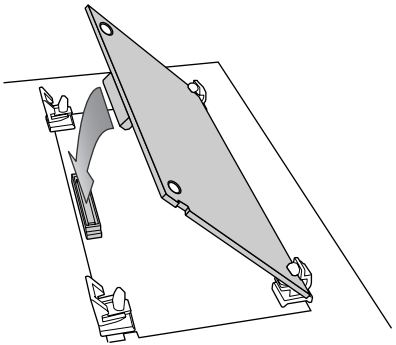


3. Insert the board into the product's non-latched board holders until you hear a click.

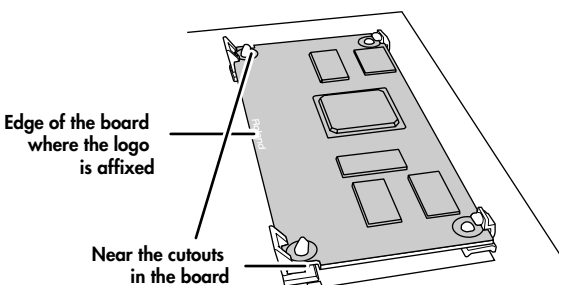




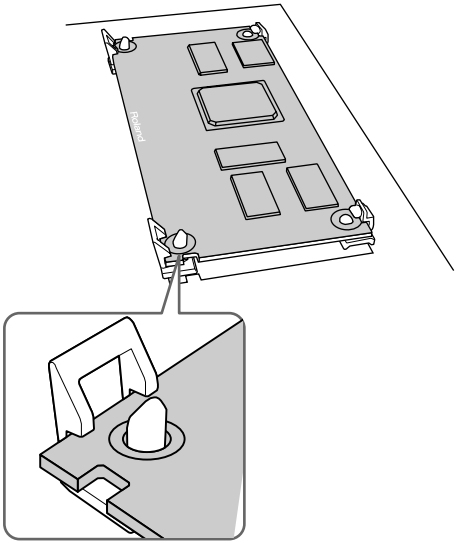
4. Gently lower the board into place.



5. From above, press down on the board at the three locations indicated in the illustration until the latched board holders lock into place.



6. Verify that the latched board holders are locked.



7. Return the expansion board installation slot to its original state.

Confirmation after Installation

After you've finished installing the expansion board, you will need to perform the following procedure to confirm the installation. This installation procedure needs to be performed only the first time you power up your device after installing the expansion board.

1. **Power up your device as described in its owner's manual.**

2. **If the expansion board was installed correctly, an installation confirmation screen will appear. Press the [F8] (Execute) button to begin installation.**

Install Menu
This process will require several minutes.
Never turn off the power until this process has been completed.
F7 Cancel
F8 Execute

* The screen shown here is for when the board is installed in the Fantom-G.

NOTE
If the installation confirmation screen does not appear the first time you power up after installing the expansion board, it is likely that the board was not installed correctly. Check once again to make sure that the board is correctly installed.

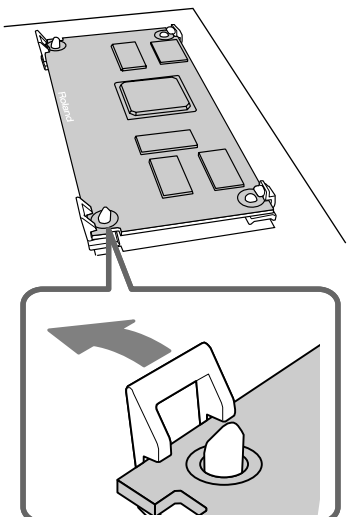
NOTE
It may take one to five minutes before installation is finished. Never turn off the power during this installation process.

3. **When you see the Power Off screen indicating that installation is finished, switch your device's "Please Power Off!", then on again as described in its owner's manual.**

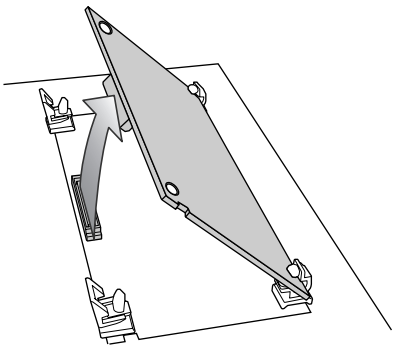
This completes the expansion board installation process.

To Remove the Board from the Product

1. As described in your product's owner's manual, expose the slot in which the expansion board was installed.
2. Unlatch the latched board holders.



3. Verify that the two latched board holders are unlocked, then gently pull up the board and disconnect the connector.



4. Disengage the board from the non-latched board holders, and remove the board.

Installation de la carte d'expansion dans un appareil

French language for Canadian Safety Standard

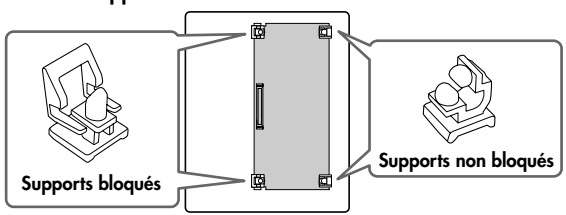
Mises en garde relatives à l'installation

- Avant d'installer cette carte d'expansion (la carte), il faut lire attentivement la procédure d'installation des cartes d'expansion décrite dans le guide d'utilisation de l'appareil dans lequel la carte sera installée.
- Veuillez suivre attentivement les instructions suivantes quand vous manipulez la carte afin d'éviter tout risque d'endommagement des pièces internes par l'électricité statique.
  - Toujours toucher un objet métallique relié à la terre avant de manipuler la carte pour vous décharger de l'électricité statique que vous auriez pu accumuler.
  - Lorsque vous manipulez la carte, la tenir par les côtés. Évitez de toucher aux composants ou aux connecteurs.
  - Conservez le sachet d'origine dans lequel était la carte lors de l'envoi et remettez la carte dedans si vous devez la ranger ou la transporter.
- Ne pas toucher aux circuits imprimés ou aux connecteurs.
- Ne jamais forcer lors de l'installation de la carte de circuits imprimés. Si la carte s'ajuste mal au premier essai, enlevez la carte et recommencez l'installation.
- Quand l'installation de la carte de circuits imprimés est terminée, revérifiez si tout est bien installé.

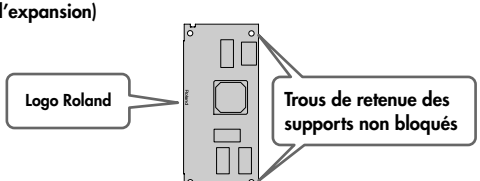
Installer la carte dans un appareil

1. **Suivre les instructions données dans le guide d'utilisation de l'appareil pour dégager la fente où la carte d'expansion doit être installée.**
2. **Orienter la carte de façon à ce qu'elle s'aligne avec la vente de l'appareil, comme le montre l'illustration.**

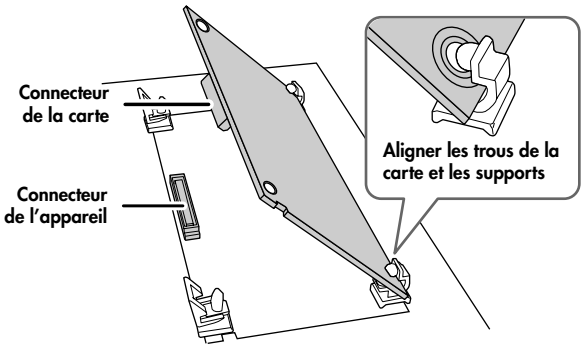
Fente de l'appareil

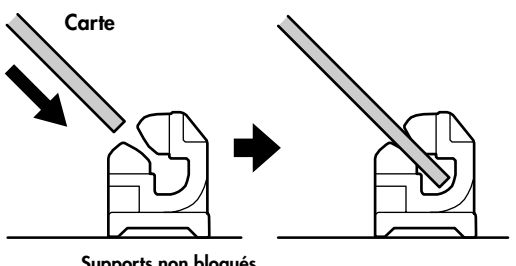


Carte
(carte d'expansion)

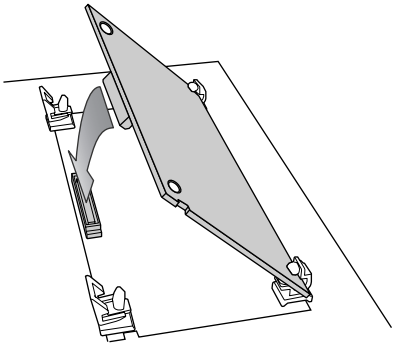


3. Insérer la carte dans les supports non bloqués jusqu'à ce qu'un clic se fasse entendre.

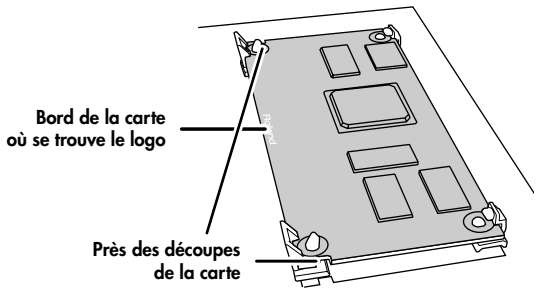




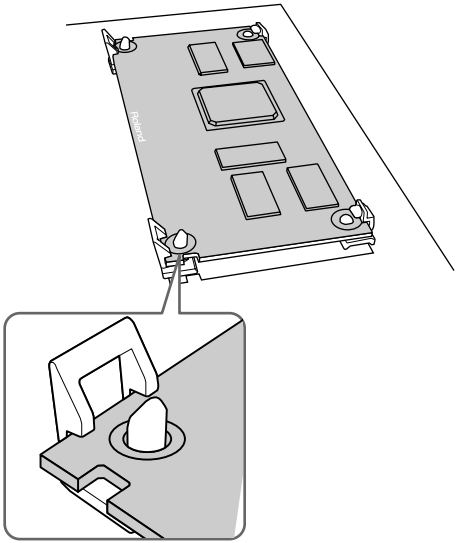
4. Abaisser la carte délicatement.



5. Appuyer sur la carte aux trois points indiqués sur l'illustration jusqu'à ce que les supports se bloquent en place.



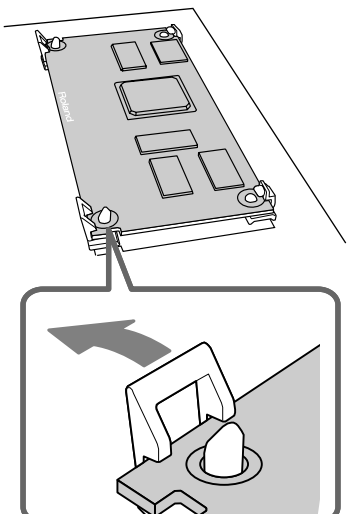
6. S'assurer que les supports de carte sont bien bloqués.



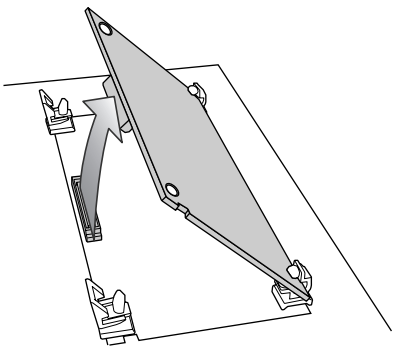
7. Suivre les instructions données dans le guide d'utilisation et vérifier que la carte d'expansion est installée correctement.

Retirer la carte de l'appareil

1. **Suivre les instructions données dans le guide d'utilisation de l'appareil pour dégager la fente où la carte d'expansion a été installée.**
2. **Débloquer les supports de carte.**



3. **Vérifier que les deux supports de carte sont débloqués puis tirer délicatement sur la carte et déconnecter le connecteur.**



4. **Retirer la carte des supports débloqués, et la retirer ensuite complètement.**

Main Features

ARX Series SuperNATURAL Expansion Boards

The ARX series SuperNATURAL expansion boards represent a further evolution for Roland's line of expansion solutions, which began with the SR-JV80 series and SRX series—they are a completely new type of expansion board. SuperNATURAL technology delivers natural, richly expressive sounds and effects along with a dedicated graphic user interface, all adding up to a comprehensive application environment that allows an unprecedented degree of expressive playability and customization.

Roland SuperNATURAL Technology

SuperNATURAL

Proprietary Roland sound generation technology that realistically reproduces the tonal changes and performance techniques distinctive of an acoustic instrument, allowing you to perform music that is natural and richly expressive.

ARX-03 Brass

High-quality brass sounds using SuperNATURAL technology

The ARX-03 Brass Expansion board uses SuperNATURAL technology to bring you high-quality brass sounds and new, more intuitive editing features.

Various performance expressions distinctive to brass instruments that were difficult to play from a keyboard can now be reproduced without special operations, and expressively played with realistic tone

Create brass sections with as many as six players with the new "Section" feature

In addition to playing each instrument solo, you can use the Section feature to create and play brass sections consisting of up to six "players." With this function, the performance of each player in the section will take advantage of the distinctive characteristics of the instrument being used; you are free to specify not only the type and volume balance of each instrument, but also make settings for the personality of each player, such as the accuracy and personality of the performance.

This is fundamentally different than the conventional method of "selecting a sound"; it is a new type of editing that allows you to produce high-quality brass sounds by creating your very own brass section.

Stereo reverb taken from the Fantom-G

Built into the ARX-03 are eight types of reverb taken from the Fantom-G. This beautiful reverberation will further enhance the amazing brass sounds.

Multi-effects that meet the needs of diverse musical styles

The ARX-03 contains fifteen multi-effects optimized for brass, including a Lo-Fi effect that delivers the "oldies" sound of the sixties, a comp-limiter used in rock styles to enhance the sonic power, and multiple delays that are particularly effective in solo performance.

The Structure of ARX-03 Brass

Basic structure

The ARX series of SuperNATURAL expansion boards receives performance data and control from a device that supports the ARX series, produces sound in response to this data, and transmits it as a stereo audio signal to the supporting device.

* The ARX series supports up to sixteen parts, but ARX-03 Brass product is designed with only one part.

Player

The "player" is the smallest unit of sound on the ARX-03 Brass.

For each player, you can select an instrument of eight types, such as trumpet, trombone, or sax.

The ARX-03 Brass can simultaneously use up to six players.

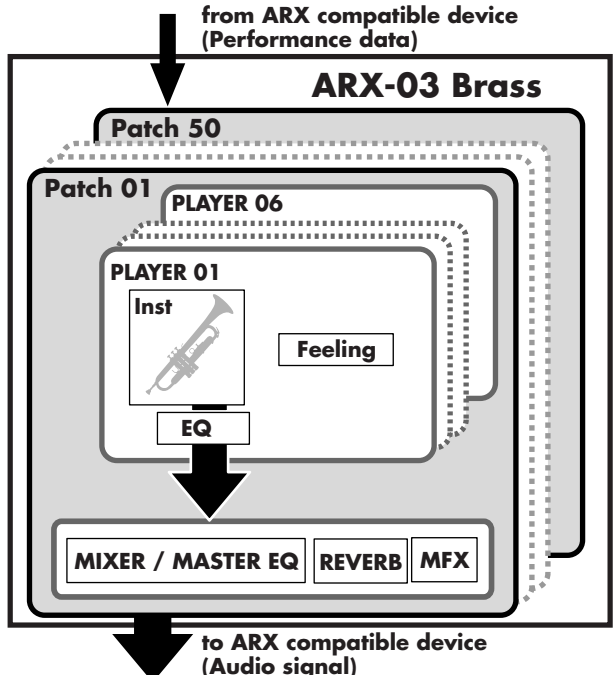
Patch

Settings for six players, MFX (multi-effect) settings, and reverb settings can be collectively saved as a "patch."

The ARX-03 Brass contains fifty such patches.

* If the ARX-03 is installed in a Fantom-G, the patch data is saved in the Fantom-G project.

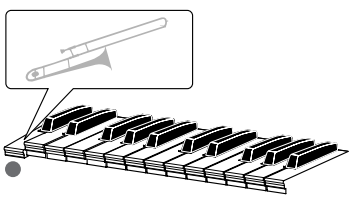
* If you've installed the ARX-03 in a Fantom-G6/G7/G8, executing a Factory Reset for the Fantom-G6/G7/G8 will reset the expansion boards to their factory-set condition.



Different Ways to Play the ARX-03

Playing a Solo

By setting the Player Select parameter (p. 24) to a specific player from 1 through 6, you can play a solo for the specified player. Playing solo allows you to perform while conveying a sense of the breathing that's distinctive to wind instruments.



Playing a Section

By setting the Player Select parameter (p. 24) to "ALL," you can play a section performance consisting of up to six players. The ARX-03 will automatically assign the notes among the six players according to your playing on the keyboard, allowing you to play the brass section by yourself.

When playing a section you can choose one of the two following performance modes.

* For details on switching between performance modes, refer to "Player Settings (Player Edit)" (p. 25).

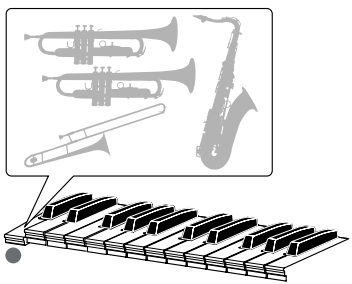
- Unison mode (p. 21)
- Stack mode (p. 22)

Unison Mode

When you play a single key or multiple keys simultaneously with a four-player ensemble setting, the various instruments will be assigned as follows.

When you play single notes

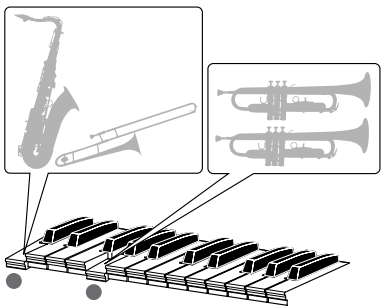
All assigned instruments will sound at the same pitch. Each instrument will sound in an octave that's appropriate for it.



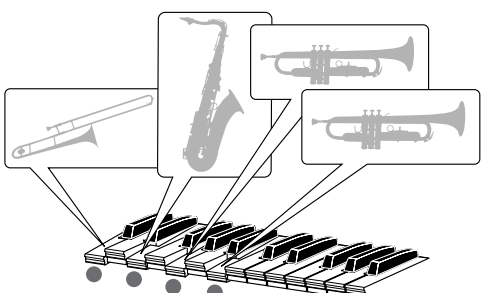
When you play multiple notes simultaneously

Each instrument will automatically be assigned to a note you play. Units of instruments automatically assigned to a note you play are called a group.

Example: If you play two notes



Example: If you play four notes

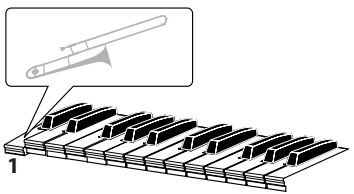


Stack Mode

This allows you to successively layer each instrument in the order you've specified "Playing settings (Section Style screen)" (p. 29). Using this mode allows you to simulate the bell tones played by a brass ensemble.

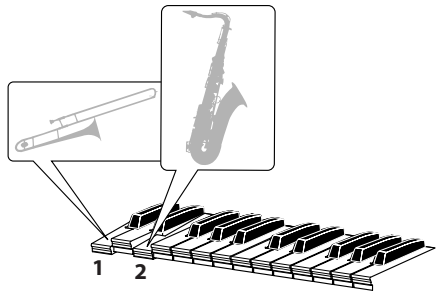
When you play single notes

Only the first instrument will sound.



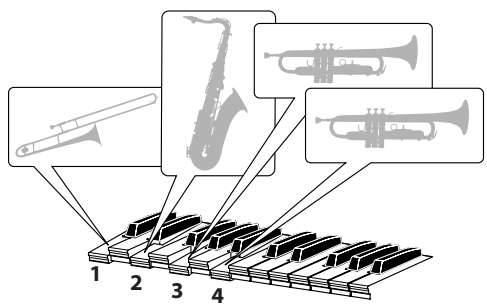
When you play a second note as well...

The first instrument will continue sounding, and the second instrument will be added.



When you additionally play a third and fourth note...

The sounds of the third and fourth instrument will be successively layered.



About this manual

- The screen images used in this manual are taken from a Fantom-G with the ARX-03 installed. The various procedures described also assume that you are using the ARX-03 installed in a Fantom-G.
- For details on how to move the cursor or edit a value, refer to the owner's manual for the device in which you've actually installed the ARX-03.

Main Screen

This screen is used mainly to select patches.
By changing the Player Select setting you can switch between playing the section (ALL) or playing a solo (1–6).

Patch Selection and Indicator

Move the cursor to PATCH Number/Name and change the value to select a patch (001–050).

PATCH Number/Name

The indicators show the following information.

No.	Indicator	Description
1	L/R Level Indicator	Left/right levels of the sound
2	Player Indicator	The players that are currently playing will be lit
3	Section Group Indicator	The indicators will be lit at the same height for players in the same group
4	Section Play Mode Indicator	Play mode status *1
5	Variation Indicator	Performance variation status *1
6	MFX Switch	Turns the multi-effect on/off *2
7	Reverb Switch	Turns the reverb on/off *2

*1 This setting cannot changed in the main screen. You can adjust this in "Playing settings (Section Style screen)" (p. 29)
These Parameters can be controlled using a specified controller (p. 39).

*2 This setting cannot changed in the main screen. You can adjust this in "Applying effects (Routing screen)" (p. 33)

Player Select setting

When playing the section (Player Serect = ALL)

You can play a section performance consisting of up to six players.You can change the mute setting and instrument level setting for each player.

No.	Parameter	Value	Description
1	Player Select	All, Solo1–Solo6	Selects the Player • All: Section performance • Solo1–Solo6: Solo performance
2	Master Level	0–127	Adjusts the volume of the entire patch
3	Play/Standby	PLAY, STANDBY	Turns the sound of each player on/off
4	Inst Pan	L64–63R	Adjusts the pan of each instrument
5	Inst Level	0–127	Adjusts the volume of each instrument

When playing a solo (1–6)

You can play a solo for the specified player.
You can adjust the instrument level of the selected player.

No.	Parameter	Value	Description
1	Player Select	All, Solo1–Solo6	Selects the Player • All: Section performance • Solo1–Solo6: Solo performance
2	Master Level	0–127	Adjusts the volume of the entire patch
3	Inst Pan	L64–63R	Adjusts the pan of each instrument
4	Inst Level	0–127	Adjusts the volume of each instrument

Player Settings (Player Edit)

In the Player Edit screens you can create a patch by choosing an instrument for the player, and specifying the accuracy (Stability) and personality (Personality) of the performer, just as though you were a producer giving instructions to a wind musician or a brass ensemble.

Selecting an instrument (Inst/Level screen)

In this screen you can choose from eight instrument types and variations.

Current Player

On the Fantom-G
From Main Screen
F3>F3

Current Player (PLAYER 1–PLAYER 6)

Indicates the number of the currently selected player

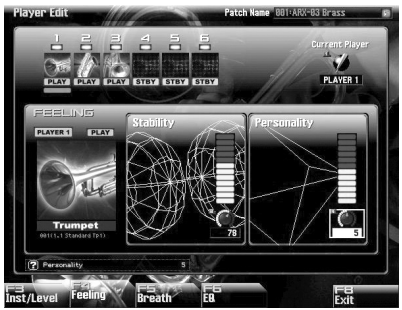
* This is not shown for solo performances.

Parameter	Value	Description
Inst Type	Trumpet, Mute Trumpet, Flugel Horn, Trombone, Soprano Sax, Alto Sax, Tenor Sax, Baritone Sax	Selects one of eight instrument types
Inst Number	Available values will differ depending on the selected Inst. Type	Selects a variation of the instrument selected by Inst Type
Play/Standby	PLAY, STANDBY	Turns the sound of each player on/off *1
Inst Level	0–127	Adjusts the volume of each instrument
Inst Pan	L64–63R	Adjusts the pan of each instrument

*1 This is not shown for solo performances.

Feeling settings (Feeling screen)

Here you can adjust the tone by making settings that control aspects of the performer's personality, such as the accuracy of the performance (Stability) and the prominence of their playing (Personality).



From Main Screen
F3>F4
(on the Fantom-G)

Parameter	Value	Description
Stability	0–127	Adjusts the accuracy of the player
Personality	0–10	Adjusts the prominence of the player

Stability (Accuracy of the performance)

This adjusts the accuracy of the performance relative to your keyboard playing.

With a value of 0

The initial pitch at the beginning of each note will be unstable. There will also be a greater spread between the timing of each player's notes.

With the maximum value

The pitch at the beginning of each note and the timing of the notes will both be accurate.

* With a Player Select setting of 1–6, this parameter will not affect the spread of the note timing.

Personality

This adjusts the volume and the timing of the end of each note relative to your keyboard performance, making the specified player more prominent in the ensemble.

With a value of 0

The volume and timing will be according to your keyboard playing.

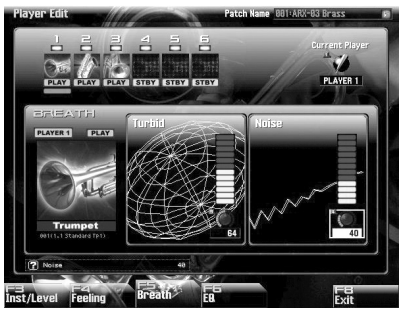
With the maximum value

The volume will be somewhat louder than your keyboard playing. Additionally, the end of the note will be somewhat later, causing that instrument to be more prominent in the ensemble.

* With a Player Select setting of 1–6, this parameter will not affect the volume; only the timing of the end of the notes will be affected.

Breath settings (Breath screen)

Here you can adjust the tone by making settings that are distinctive to wind instruments such as "Growl" (when a Sax instrument is selected), "Turbid" (when Trumpet, Mute Trumpet, Flugel Horn, or Trombone are selected), and "Noise."



From Main Screen
F3>F5
(on the Fantom-G)

Parameter	Value	Description
Growl	0–127	Adjusts the amount of growl for strongly played notes of each instrument (Valid for Soprano Sax, Alto Sax, Tenor Sax, and Baritone Sax)
Turbid	0–127	Adjusts the turbidity for softly played notes of each instrument (Valid for Trumpet, Mute Trumpet, Flugel Horn, and Trombone)
Noise	0–127	Adjusts the amount of breath noise for each instrument

Growl (Growl sensitivity)

This adjusts the volume of the distinctive nuance (growl) that occurs when a sax is blown strongly.

With a value of 0

The amount of growl at the beginning of each note will be minimal.

With the maximum value

The beginning of each note will have the maximum amount of growl. The more strongly you play the keyboard, the stronger this effect will be.

Turbid (Turbidity)

This adjusts the volume of the distinctive nuance (turbidity or muddiness) that occurs when a trumpet or trombone is blown softly.

With a value of 0

The amount of turbidity at the beginning of each note will be minimal.

With the maximum value

The beginning of each note will have the maximum amount of turbidity. The more softly you play the keyboard, the greater this effect will be.

Noise (Amount of breath noise)

This adjusts the amount of breath noise for each instrument.

With a value of 0

The amount of breath noise will be minimal.

With the maximum value

The maximum amount of breath noise will be heard.

Equalizer settings (EQ screen)

Here you can adjust the equalizer settings for each instrument.

From Main Screen
F3>F6
(on the Fantom-G)

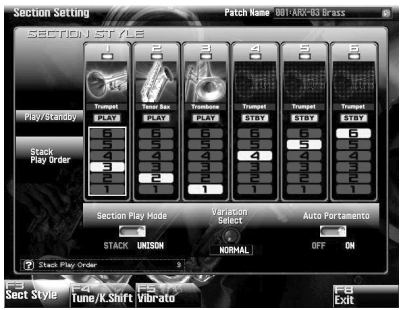
Settings for each patch

Parameter	Value	Description
Play/Standby	PLAY, STANDBY	Turns the sound of each player on/off.
Low Freq	200, 400 Hz	Center frequency of the low range
Mid Freq	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz	Center frequency of the midrange
High Freq	2000, 4000, 8000 Hz	Center frequency of the high range
Low Gain	-15–+15 dB	Amount of boost/cut for the low range
Mid Gain	-15–+15 dB	Amount of boost/cut for the midrange
Mid Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the midrange Higher values will make the width narrower.
High Gain	-15–+15 dB	Amount of boost/cut for the high range
EQ Switch	BYPASS, ON	Turns the EQ on/off

Section Settings (Section)

Playing settings (Section Style screen)

Here you can make basic settings for playing a Section.



From Main Screen
F4>F3
(on the Fantom-G)

Parameter	Value	Description
Play/Standby	PLAY, STANDBY	Turns the sound of each player on/off.
Stack Play Order	1–6	Specifies the order in which each instrument will play when you perform using Stack mode Refer to "Stack Mode" (p. 22). *1
Section Play Mode	UNISON, STACK	Switches between Unison mode and Stack mode *1 *2
Auto Portamento Switch	OFF, ON	Automatically adds a smooth pitch change when you play a quick phrase as a legato.
Variation Select	NORMAL, STACCATO, FALL, DOIT	Selects the performance variation • NORMAL • Staccato • Fall • Doit

* If the Stack Play Order settings are identical, the instruments will sound in the order of their player number.

* Staccato, Fall, and Doit cannot be used simultaneously. The last-specified one will take priority.

*1 This setting is valid only for Section playing.

*2 If a multiple number of keys are played simultaneously while in Unison mode, the instruments will be assigned in order, according to the Player number, starting from the upper range.

MEMO

"Section Play Mode" and " Variation Select " parameters can be controlled using a specified controller (p. 39).

Pitch settings (Tune/Key Shift screen)

Here you can make settings for the pitch (tuning and key).

From Main Screen
F4>F4
(on the Fantom-G)

Settings for each instrument

Parameter	Value	Description
Play/Standby	PLAY, STANDBY	Turns the sound of each player on/off
Inst Key Shift	-48–48	Adjusts the pitch of the sound This setting is in semitone steps.
Inst Fine Tune	-50–50	Adjusts the pitch of the sound This setting is in one-cent steps. * 1 cent = 1/100th of a semitone

Settings for each patch

Parameter	Value	Description
Unison Key Shift Mode	NONE, FIXED, AUTO	Specifies the “Inst Key Shift” setting. NONE: The “Inst Key Shift” will be ignored. FIXED: The “Inst Key Shift” setting will be applied. AUTO: The “Inst. Key Shift” setting will be applied only when you’re playing single notes in Unison mode. The “Inst Key Shift” setting will be ignored if you play chords in Unison mode, or if you’re in Stack mode.

* The ”Unison Key Shift Mode” setting is valid only for Section playing.
* The "Inst Key Shift" setting applies to Solo playing regardless of the "Unison Key Shift Mode" setting.

Vibrato settings (Vibrato screen)

Here you can make settings for the vibrato.

From Main Screen
F4>F5
(on the Fantom-G)

Settings for each instrument

Parameter	Value	Description
Play/Standby	PLAY, STANDBY	Turns the sound of each player on/off
Inst Vibrato Depth	0–127	Adjusts the vibrato depth

Settings for each patch

Parameter	Value	Description
Vibrato Rate	-64–+63	Adjusts the vibrato speed
Vibrato Delay Time	-64–+63	Adjusts the delay time until vibrato begins to be applied
Vibrato Depth	-64–+63	Adjusts the vibrato depth

Volume Balance Settings (MIXER)

Volume and pan settings (Level/Pan screen)

Here you can adjust the volume and pan settings for each instrument.

From Main Screen
F5>F3
(on the Fantom-G)

Settings for each instrument

Parameter	Value	Description
Play/Standby	PLAY, STANDBY	Turns the sound of each player on/off
Output Assign	DRY, MFX	Selects whether the original signal will be output without further processing or output via MFX. DRY: Output without further processing MFX: Output via multi-effect
Reverb Send Level	0–127	Specifies the level of the signal sent to the reverb effect
Inst Pan	L64–63R	Adjusts the pan of each instrument
Inst Level	0–127	Adjusts the volume of each instrument

Equalizer settings (EQ screen)

Here you can adjust the equalizer settings for each instrument.

On the Fantom-G
From Main Screen
F5>F4

Settings for each instrument

Parameter	Value	Description
Play/Standby	PLAY, STANDBY	Turns the sound of each player on/off
High Freq	2000, 4000, 8000 Hz	Center frequency of the high range
High Gain	-15–+15 dB	Amount of boost/cut for the high range
Mid Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the midrange Higher values will make the width narrower
Mid Freq	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz	Center frequency of the midrange
Mid Gain	-15–+15 dB	Amount of boost/cut for the midrange
Low Freq	200, 400 Hz	Center frequency of the low range
Low Gain	-15–+15 dB	Amount of boost/cut for the low range
EQ Switch	BYPASS, ON	Turns the EQ on/off

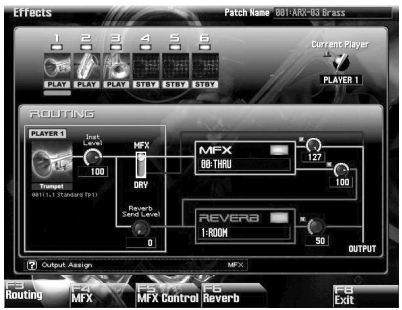
MASTER (Settings for each patch)

Parameter	Value	Description
MASTER EQ Switch	BYPASS, ON	Turns the EQ on/off
MASTER Low Freq	200, 400 Hz	Center frequency of the low range
MASTER High Freq	2000, 4000, 8000 Hz	Center frequency of the high range
MASTER Low Gain	-15–+15 dB	Amount of boost/cut for the low range
MASTER High Gain	-15–+15 dB	Amount of boost/cut for the high range
Master Level	0–127	Adjusts the volume of the entire patch
MASTER Pan	L64–63R	Adjusts the pan of the entire patch

Effect Settings (Effects)

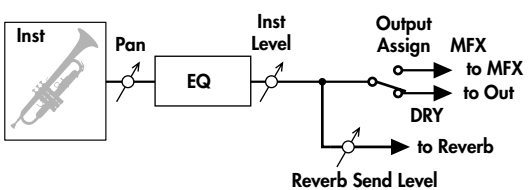
Applying effects (Routing screen)

Here you can make multi-effect (MFX) and reverb settings.



On the Fantom-G
From Main Screen
F6>F3

Signal Flow



Parameter	Value	Description
Inst Level	0–127	Adjusts the volume of each instrument

Parameter	Value	Description
Output Assign	DRY, MFX	Selects whether the original signal will be output without further processing or output via MFX. DRY: Output without further processing MFX : Output via multi-effect
Reverb Send Level	0–127	Specifies the level of the signal sent to the reverb effect
MFX Switch	OFF, ON	Turns the multi-effect on/off
MFX Type	00 (THRU), 01–15	Selects the multi-effect type. For details on each type, refer to "Multi-Effects List" (p. 42)
MFX Output Level	0–127	Specifies the volume of the sound that has passed through the multi-effect.
MFX Reverb Send Level	0–127	Specifies the amount of reverb that will be applied to the sound that has passed through the multi-effect. Set this to 0 if you don't want to apply reverb.
Reverb Switch	OFF, ON	Turns the reverb on/off
Reverb Type	0 (OFF), 1 (ROOM), 2 (HALL), 3 (PLATE), 4 (STUDIO), 5 (CHURCH), 6 (SRV ROOM), 7 (SRV HALL), 8 (SRV PLATE)	Selects the type of reverb For details on each type, refer to "Reverb settings (Reverb screen)" (p. 36).
Reverb Level	0–127	Specifies the volume of the sound with reverb applied.

Multi-effect settings (MFX screen)

The Effects/MFX screen lets you edit the multi-effect parameters.

In this screen you can make detailed settings for the multi-effect selected by "MFX Type" (p. 34). For more about the parameters that you can edit, refer to "Multi-effect list" (p. 42).

From Main Screen
F6>F4
(on the Fantom-G)

Parameter	Value	Description
MFX Type	00 (THRU), 01–15	Selects the type of multi-effect. For details on each type, refer to "Multi-Effects List" (p. 42).
MFX Switch	OFF, ON	Turns the multi-effect on/off
Control Assign 1–4	Depends on the MFX Type	Multi-effect control allows you to use MIDI messages to control the parameters of the multi-effect.

MEMO

For details on Control Assign 1–4, refer to "Multi-effect control (MFX Control Screen)" (p. 35).

Multi-effect control (MFX Control Screen)

If you want to use an external MIDI device to control multi-effect parameters such as the volume or delay time of the effect, you would normally need to transmit device-specific types of MIDI messages called "system exclusive" messages. However, system exclusive messages involve complex settings, and require a larger amount of data to be transmitted.

For this reason, the ARX-03 expansion board lets you use conventional MIDI messages, such as control change messages, to control some of the important multi-effect parameters. For example, you could use the pitch bend lever to change the amount of distortion, or use keyboard touch to change the delay time. The parameters that can be controlled in this way are pre-specified for each multi-effect type. For each multi-effect type, such parameters are indicated by a "#" symbol in the "Multi-effect parameters" list (p. 42).

Multi-effect control refers to this capability of using MIDI messages to control multi-effect parameters in real time. The ARX-03 expansion board lets you use four multi-effect control settings simultaneously.

To use multi-effect control, you need to specify which MIDI source (Source 1–4) will be controlled by which parameter (Control Assign 1–4), and to what extent (Sens 1–4).

From Main Screen
F6>F5
(on the Fantom-G)

MFX Control Sens 1–4

Value	Description
-63–+63	Specifies the depth of multi-effect control. Select a positive (+) value if you want to modify the parameter in the positive direction (higher value, toward the right, faster, etc.) relative to its current setting. Select a negative (-) value if you want to modify the parameter in the negative direction (lower value, toward the left, slower, etc.) relative to its current setting. For either "+" or "-" settings, larger values will allow a greater range of control. Select "0" if you don't want to modify the parameter.

MFX Control Source 1–4

Value	Description
OFF	Multi-effect control will not be used.
CC 01–CC95	Control change
PITCH BEND	Pitch bend
AFTERTOUCH	After touch
AUDIO	Level of the signal being input to MFX

Reverb settings (Reverb screen)

In the Effects/Reverb screen you can specify the type of reverb and how it will sound.

From Main Screen
F6>F6
(on the Fantom-G)

Parameter	Value	Description
Reverb Type	00 (OFF), 01 (ROOM), 02 (HALL), 03 (PLATE), 04 (STUDIO), 05 (CHURCH), 06 (SRV ROOM), 07 (SRV HALL), 08 (SRV PLATE)	Reverb type
Reverb Switch	OFF, ON	Turns the reverb on/off
Type: 1 (ROOM)/ 4 (STUDIO)		
Pre Delay	0–100 ms	Delay time from the original sound until the reverb is heard
Time	0.1–3.0 sec.	Time over which the reverb sound decays
Low Damp Freq	20–1000 Hz	Frequency below which the low range of the reverb sound will be dampened
Low Damp	1–100%	Amount of attenuation for LF damp (100%: no effect)
High Damp Freq	1000–10000 Hz	Frequency above which the high range of the reverb sound will be dampened
High Damp	1–100%	Amount of attenuation for HF damp (100%: no effect)
High Cut Freq	1000–10000 Hz	Frequency above which the high range of the final output sound will be cut
Type: 2 (HALL)/ 3 (PLATE)/5 (CHURCH)		
Pre Delay	0–100 ms	Delay time from the original sound until the reverb is heard

Parameter	Value	Description
Time	0.1–6.0 sec.	Time over which the reverb sound decays
Low Damp Freq	20–1000 Hz	Frequency below which the low range of the reverb sound will be dampened
Low Damp	1–100%	Amount of attenuation for LF damp (100%: no effect)
High Damp Freq	1000–10000 Hz	Frequency above which the high range of the reverb sound will be dampened
High Damp	1–100 %	Amount of attenuation for HF damp (100%: no effect)
High Cut Freq	1000–10000 Hz	Frequency above which the high range of the final output sound will be cut
Type: 6 (SRV ROOM)/ 7 (SRV HALL)/ 8 (SRV PLATE)		
Pre Delay	0.0–100 ms	Delay time from the original sound until the reverb is heard
Time	0–127	Time over which the reverb sound decays
Size	1–8	Size of the room or hall
High Cut Freq	160 Hz–12500 Hz, BYPASS	Frequency above which the high range of the final output sound will be cut (BYPASS: no cut)
Density	0–127	Density of the reverberation
Diffusion	0–127	Change in reverb density over time With higher values, the sound will become denser over time. This is particularly noticeable with longer reverb times.

Parameter	Value	Description
LF Damp Freq	50–4000 Hz	Frequency below which the low range of the reverb sound will be dampened
LF Damp Gain	-36–0 dB	Amount of attenuation for LF damp (0: no effect)
HF Damp Freq	4000 Hz–12500 Hz	Frequency above which the high range of the reverb sound will be dampened
HF Damp Gain	-36–0 dB	Amount of attenuation for HF damp (0: no effect)

Controller Assignments (CONTROL)

Here you can assign controllers to switch between Unison mode and Stack mode, or to switch between performance variations.
For example, you could use a pedal to switch between Unison mode and Stack mode.

Bender settings (Bend/Hold screen)

Here you can specify bender range for each instrument.

From Main Screen
F7>F3
(on the Fantom-G)

Settings for each instrument

Parameter	Value	Description
Play/Standby	PLAY, STANDBY	Turns the sound of each player on/off.
Bend Range Up	0–12	Specifies the amount of pitch change for BendUp This setting is in semitone steps (valid when Bender Mode is "NORMAL," "LOCK1" or "LOCK2").
Bend Range Down	0–12	Specifies the amount of pitch change for BendDown This setting is in semitone steps (valid when Bender Mode is "NORMAL," "LOCK1" or "LOCK2").

* For the SuperNATURAL brass (BRASS) sounds, setting the bend range (RANGE) to 3 or higher will simulate the discontinuous pitch change that is typical of brass instruments, instead of the normal smooth pitch change. When you apply a downward bend, the sound will behave in the manner distinctive of brass instruments, meaning that the volume will also decrease.

Settings for each patch

Parameter	Value	Description
Bender Mode	NORMAL, LOCK1, LOCK2, COMBI	Specifies what happens when you operate the bender NORMAL: Normal operation LOCK1: Bend will apply only to the first-played key. LOCK2: No change will be produced by returning the bender. COMBI: This mode allows you to express the subtle pitch changes that are distinctive of a brass instrument. The proportion of breath noise will increase when you operate the bender in the Down direction.This lets you freely control the breathiness at the beginning or end of a note.

Parameter	Value	Description
Hold Mode	NORMAL, LEGATO, ACCOMP	Switches the mode in which the damper pedal will operate NORMAL: Operates as a conventional damper pedal. LEGATO: Sustains the currently sounding note until the next key is played. ACCOMP: Produces a sostenuto-like effect.

Controller assignments for each patch (Control Assign 1 screen)

Here you can assign performance controllers for individual patch.

From Main Screen
F7>F4
(on the Fantom-G)

Parameter	Value	Description
Staccato Controller Assign	OFF, CC1–CC95, PITCH BEND, AFTERTOUCH	Specifies the number of the controller that will turn "Staccato" on
Fall Controller Assign	OFF, CC1–CC95, PITCH BEND, AFTERTOUCH	Specifies the number of the controller that will turn "Fall" on
Doit Controller Assign	OFF, CC1–CC95, PITCH BEND, AFTERTOUCH	Specifies the number of the controller that will turn "Doit" on
Unison/Stack Controller Assign	OFF, CC1–CC95, PITCH BEND, AFTERTOUCH	Specifies the number of the controller that will switch between Unison mode and Stack mode

Controller assignments for individual instruments (Control Assign 2 screen)

Here you can assign performance controllers for individual instruments.

In this screen you can assign volume and tone, vibrato, and pitch to the desired control change messages.

This allows you to produce smooth change by using continuous controllers such as an expression pedal or modulation lever.

From Main Screen
F7>F5
(on the Fantom-G)

Parameter	Value	Description
Dynamics Control 1	OFF, CC1–CC95, PITCH BEND, AFTERTOUCH	Specifies the number of the controller 1 that will affect dynamics (volume/tone)
Dynamics Control 2	OFF, CC1–CC95, PITCH BEND, AFTERTOUCH	Specifies the number of the controller 2 that will affect dynamics (volume/tone)
Vibrato Control 1	OFF, CC1–CC95, PITCH BEND, AFTERTOUCH	Specifies the number of the controller 1 that will affect vibrato depth
Vibrato Control 2	OFF, CC1–CC95, PITCH BEND, AFTERTOUCH	Specifies the number of the controller 2 that will affect vibrato depth
Pitch Control 1	OFF, CC1–CC95, PITCH BEND, AFTERTOUCH	Specifies the number of the controller 1 that will affect pitch
Pitch Control 2	OFF, CC1–CC95, PITCH BEND, AFTERTOUCH	Specifies the number of the controller 2 that will affect pitch
Portamento Control	OFF, CC1–CC95, PITCH BEND, AFTERTOUCH	Specifies the number of the controller that will turn portamento on/off
Dynamics Control 1Sens	0–127	Specifies the extent to which controller number 1 will change the dynamics (volume/tone)
Dynamics Control 2Sens	0–127	Specifies the extent to which controller number 2 will change the dynamics (volume/tone)
Vibrato Control 1Sens	0–127	Specifies the extent to which controller number 1 will change the vibrato depth
Vibrato Control 2Sens	0–127	Specifies the extent to which controller number 2 will change the vibrato depth
Pitch Control 1Sens	-64–63	Specifies the extent and direction in which controller 1 will change the pitch
Pitch Control 2Sens	-64–63	Specifies the extent and direction in which controller 2 will change the pitch

Initializing a Patch (Utility Screen)

In the Utility screen you can initialize patch.

This operation lets you return the settings of the current patch to their default values.

Patch Init will initialize the settings of the current patch.

1. **Select the patch that you want to initialize.**
2. **In the Utility screen, choose Patch Init.**
3. **When the confirmation screen appears, press the [F7] (OK) button.**

   If you decide to cancel, press the[F8] (EXIT) button.

Saving a Patch (on the Fantom-G)

A patch you've created is temporary; it will be lost if you select a different patch. If you want to save the patch you've edited, proceed as follows.

1. **Press the [WRITE] on the Fantom-G.**
2. **Assign a name to the patch.**

   For details on how to assign a name, refer to the Fantom-G owner's manual.

3. **When you've finished assigning the name, press the [F8] (OK) button.**
4. **Select a patch number, and press the [F8] (WRITE) button.**
5. **When the confirmation screen appears, press the [F7] (OK) button to save the patch.**

* If you've installed the ARX-03 in a Fantom-G6/G7/G8, executing a Factory Reset for the Fantom-G6/G7/G8 will reset the expansion boards to their factory-set condition.

Multi-Effects List

Multi-Effects Types

There are 15 types of multi-effect.

FILTER (3 types)		
01	STEREO EQ	p. 43
02	ENHANCER	p. 43
03	AUTO WAH	p. 44
CHORUS (1 types)		
04	HEXA-CHORUS	p. 44
DYNAMICS (2 types)		
05	COMPRESSOR	p. 45
06	LIMITER	p. 45
LOFI (4 types)		
07	LOFI COMPRESS	p. 46
08	TELEPHONE	p. 46
09	PHONOGRAPH	p. 47
10	TAPE ECHO	p. 48
REVERB (1 type)		
11	GATED REVERB	p. 49
DELAY (4 types)		
12	STEREO DELAY	p. 50
13	MODULATION DELAY	p. 51
14	TRIPLE TAP DELAY	p. 52
15	REVERSE DELAY	p. 52

Multi-Effects Parameters

Each multi-effect has “Control Assign” parameters. These indicate the parameters that can be controlled via “Multi-effect control (MFX Control Screen)” (p. 35).

MEMO

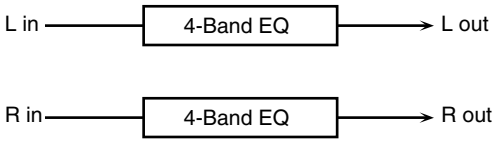
For details on the “note” that can be selected for some parameter, refer to “About Note” (p. 53)

MEMO

Parameters marked with a sharp “#” can be controlled using a specified controller (p.35).

01: STEREO EQ (Stereo Equalizer)

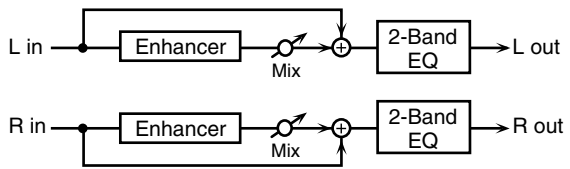
This is a four-band stereo equalizer (low, mid x 2, high).



Parameter	Value	Description
Low Freq	200, 400 Hz	Frequency of the low range
Low Gain #	-15–+15 dB	Gain of the low frequency range
High Freq	2000, 4000, 8000 Hz	Frequency of the high range
High Gain #	-15–+15 dB	Gain of the high frequency range
Mid1 Freq	200–8000 Hz	Frequency of Middle Range 1
Mid1 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of Middle Range 1 Select a higher Q value to narrow Middle Range 1.
Mid1 Gain	-15–+15 dB	Gain of Middle Range 1
Mid2 Freq	200–8000 Hz	Frequency of Middle Range 2
Mid2 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of Middle Range 2 Select a higher Q value to narrow Middle Range 2.
Mid2 Gain	-15– +15 dB	Gain of Middle Range 2
Level #	0–127	Output level

02: ENHANCER

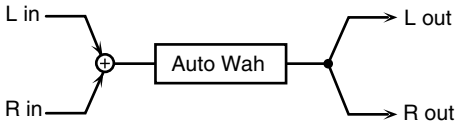
Controls the overtone structure of the high frequencies, adding sparkle and brightness to the sound.



Parameter	Value	Description
Sens #	0–127	Sensitivity of the enhancer
Mix #	0–127	Level of the overtones generated by the enhancer
Low Gain	-15– +15 dB	Gain of the low frequency range of frequencies
High Gain	-15– +15 dB	Gain of the high frequency range of frequencies
Level	0–127	Output level

03: AUTO WAH

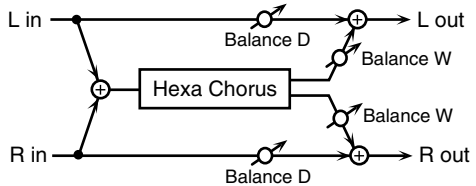
A filter that turns on and off to create a cyclical change in timbre.



Parameter	Value	Description
Filter Type	LPF, BPF	Type of filter LPF: The wah effect is applied over a wide frequency range. BPF: The wah effect is applied over a narrow frequency range
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth #	0–127	Depth of modulation
Sens	0–127	Adjusts the sensitivity with which the filter is controlled.
Manual #	0–127	Adjusts the center frequency at which the wah effect is applied.
Peak	0–127	Adjusts the amount of the wah effect that occurs in the range of the center frequency. Set a higher value for Q to narrow the range to be affected.
Level	0–127	Output level

04: HEXA-CHORUS

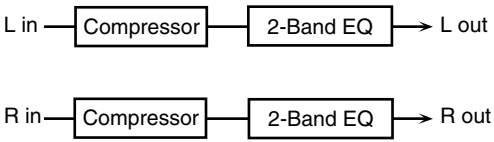
Uses a six-phase chorus (six layers of chorused sound) to give richness and spaciousness to the sound.



Parameter	Value	Description
Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the chorus sound is heard.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Pre Delay Deviation	0–20	Adjusts the differences in Pre Delay between each chorus sound.
Depth Deviation	-20– +20	Adjusts the difference in modulation depth between each chorus sound.
Pan Deviation	0–20	Adjusts the difference in stereo location between each chorus sound. 0: All chorus layers are in the center. 20: The chorus layers are spaced at 60-degree intervals relative to the center.
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output level

05: COMPRESSOR

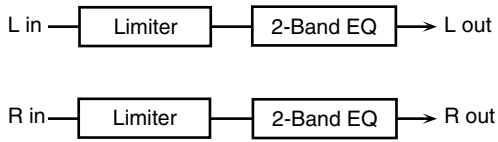
Flattens out high levels and boosts low levels, smoothing out fluctuations in volume.



Parameter	Value	Description
Attack #	0–127	Time from when the volume goes up the Threshold level until the compressor effect applies
Threshold #	0–127	Adjusts the volume at which compression begins
Post Gain	0–18 dB	Adjusts the output gain.
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Level #	0–127	Output level

06: LIMITER

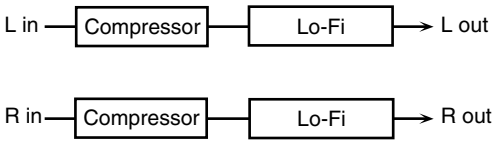
Compresses signals that exceed a specified volume level, preventing distortion from occurring.



Parameter	Value	Description
Release #	0–127	Adjusts the time after the signal volume falls below the Threshold Level until compression is no longer applied.
Threshold #	0–127	Adjusts the volume at which compression begins
Ratio	1.5:1, 2:1, 4:1, 100:1	Compression ratio
Post Gain	0–18 dB	Adjusts the output gain.
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Level #	0–127	Output level

07: LOFI COMPRESS (Lo-Fi Compress)

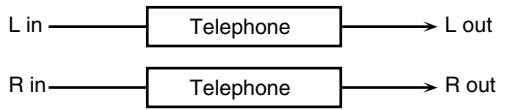
This is an effect that intentionally degrades the sound quality for creative purposes.



Parameter	Value	Description
Pre Filter Type	1–6	Selects the type of filter applied to the sound before it passes through the Lo-Fi effect.
LoFi Typ	1–9	Degrades the sound quality. The sound quality grows poorer as this value is increased.
Post Filter Type	OFF, LPF, HPF	Selects the type of filter applied to the sound after it passes through the Lo-Fi effect. OFF: no filter is used LPF: cuts the frequency range above the Cutoff HPF: cuts the frequency range below the Cutoff
Post Filter Cutoff	200–8000 Hz	Basic frequency of the Post Filter
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level #	0–127	Output level

08: TELEPHONE

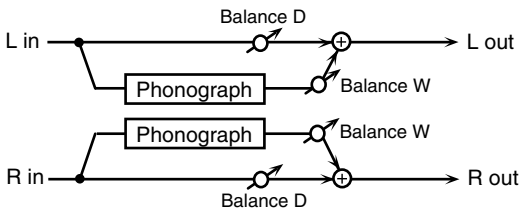
Produces a muffled sound, similar to what it would sound like if heard over the phone.



Parameter	Value	Description
Voice Quality #	0–15	Audio quality of the telephone voice
Treble	-15– +15 dB	Bandwidth of the telephone voice
Balance #	D100:0–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

09: PHONOGRAPH

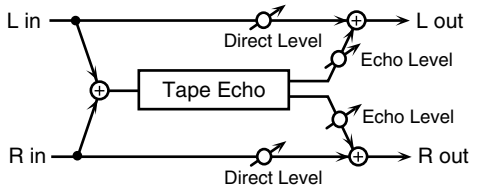
Simulates a sound recorded on an analog record and played back on a record player. This effect also simulates the various types of noise that are typical of a record, and even the rotational irregularities of an old turntable.



Parameter	Value	Description
Signal Distortion	0–127	Depth of distortion
Frequency Range	0–127	Frequency response of the playback system Decreasing this value will produce the impression of an old system with a poor frequency response.
Disc Type	LP, EP, SP	Rotational speed of the turntable This will affect the frequency of the scratch noise.
Scratch Noise Level	0–127	Amount of noise due to scratches on the record
Dust Noise Level	0–127	Volume of noise due to dust on the record
Hiss Noise Level	0–127	Volume of continuous “hiss”
Total Noise Level #	0–127	Volume of overall noise
Wow	0–127	Depth of long-cycle rotational irregularity
Flutter	0–127	Depth of short-cycle rotational irregularity
Random	0–127	Depth of indefinite-cycle rotational irregularity
Total Wow/Flutter #	0–127	Depth of overall rotational irregularity
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

10: TAPE ECHO

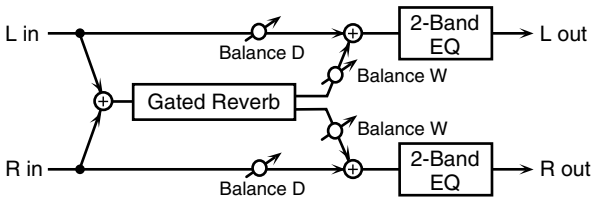
A virtual tape echo that produces a realistic tape delay sound. This simulates the tape echo section of a Roland RE-201 Space Echo.



Parameter	Value	Description
Mode	S, M, L, S+M, S+L, M+L, S+M+L	Combination of playback heads to use Select from three different heads with different delay times. S: short M: middle L: long
Repeat Rate #	0–127	Tape speed Increasing this value will shorten the spacing of the delayed sounds.
Intensity #	0–127	Amount of delay repeats
Bass	-15– +15	Boost/cut for the lower range of the echo sound
Treble	-15– +15	Boost/cut for the upper range of the echo sound
Head S Pan	L64–63R	Independent panning for the short, middle, and long playback heads
Head M Pan		
Head L Pan		
Tape Distortion	0–5	Amount of tape-dependent distortion to be added This simulates the slight tonal changes that can be detected by signal-analysis equipment. Increasing this value will increase the distortion.
Wow/Flutter Rate	0–127	Speed of wow/flutter (complex variation in pitch caused by tape wear and rotational irregularity)
Wow/Flutter Depth	0–127	Depth of wow/flutter
Echo Level #	0–127	Volume of the echo sound
Direct Level #	0–127	Volume of the original sound
Level	0–127	Output level

11: GATED REVERB

This is a special type of reverb in which the reverberant sound is cut off before its natural length.

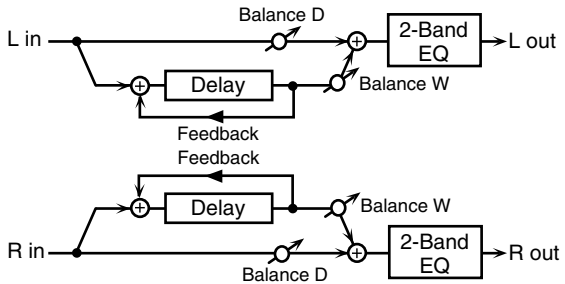


Parameter	Value	Description
Type	NORMAL, REVERSE	Type of reverb NORMAL: conventional gated reverb REVERSE: backwards reverb
Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the reverb sound is heard.
Time	5–500 ms	Adjusts the time from when the reverb is first heard until it disappears.
Pan #	L64–63R	Stereo location of Pitch Shift
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W– D0:100W	Volume balance between the direct sound (D) and the reverb sound (W)
Level #	0–127	Output level

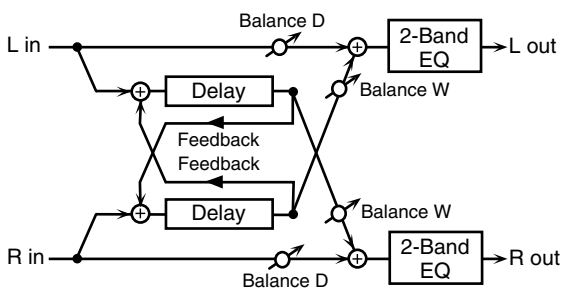
12: STEREO DELAY

This is a stereo delay.

When Feedback Mode is NORMAL:



When Feedback Mode is CROSS:

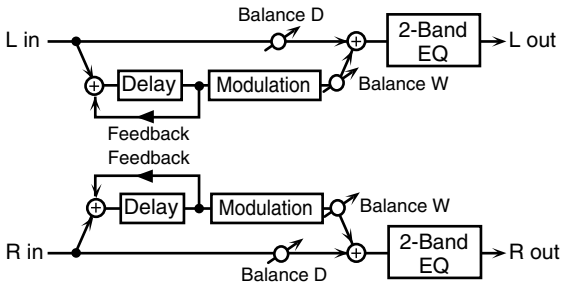


Parameter	Value	Description
Feedback Mode	NORMAL, CROSS	Selects the way in which delay sound is fed back into the effect. (See the figures of algorithm.)
Delay Left	0–2000 ms, note	Adjusts the time until the delay sound is heard.
Delay Right		
Phase Left	NORMAL, INVERT	Phase of the delay sound
Phase Right		
Feedback #	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

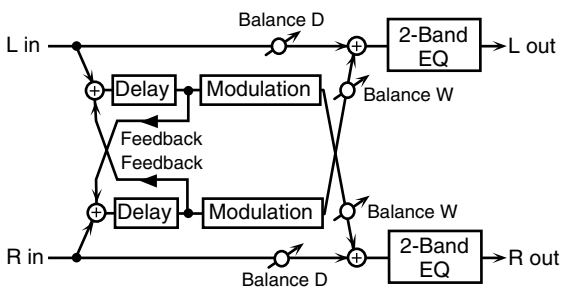
13: MODULATION DELAY

Adds modulation to the delayed sound.

When Feedback Mode is NORMAL:



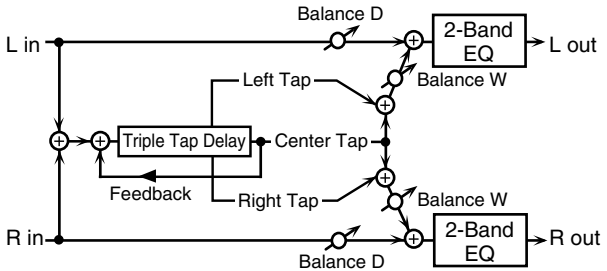
When Feedback Mode is CROSS:



Parameter	Value	Description
Feedback Mode	NORMAL, CROSS	Selects the way in which delay sound is fed back into the effect (See the figures of algorithm.)
Delay Left Delay Right	0–2000 ms, note	Adjusts the time until the delay sound is heard.
Feedback #	-98– +98%	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0-180 deg	Spatial spread of the sound
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

14: TRIPLE TAP DELAY

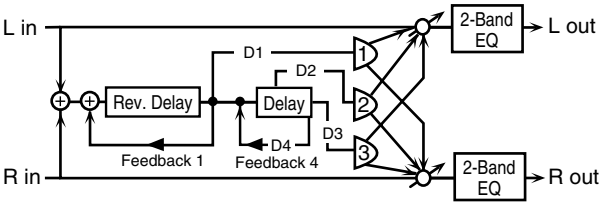
Produces three delay sounds; center, left and right.



Parameter	Value	Description
Delay Left Delay Center Delay Right	0–4000 ms, note	Adjusts the time until the center, left and right delay sound is heard.
Feedback #	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Left Level Right Level Center Level	0–127	Volume of each delay
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

15: REVERSE DELAY

Adds the reverse of the input sound as a delay.



Parameter	Value	Description
Threshold	0–127	Volume level at which the reverse delay begins
Delay 1–4	0-2000 ms, note	Adjusts the time until Delays 1–4 are heard.
Feedback 1 # Feedback 4 #	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp 1 HF Damp 4	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Pan 1–3	L64–63R	Stereo location of Delays 1–3 sound
Level 1–3	0–127	Output level of Delays 1–3 sound
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Level	0–127	Output level

About Note

Some parameters (such as Rate or Delay Time) can be set in terms of a note value instead of a time value.

Such parameters provide a Sync SW(Sync switch) that allows you to switch between setting the parameter as a note value or as a numerical value.

If you want to set it as a note value, set the Sync SW to ON.

* If a parameter that's chosen in Control Assign for multi-effect control has its Sync SW to ON, you won't be able to use multi-effect control to control that parameter.

Value	Description
1/64T (𝅘𝅥𝅯3)	Sixty-fourth-note triplet
1/64 (𝅘𝅥𝅯)	Sixty-fourth note
1/32T (𝅘𝅥𝅰3)	Thirty-second-note triplet
1/32 (𝅘𝅥𝅰)	Thirty-second note
1/16T (𝅘𝅥𝅮3)	Sixteenth-note triplet
1/32. (𝅘𝅥𝅰.)	Dotted thirty-second note
1/16 (𝅘𝅥𝅮)	Sixteenth note
1/8T (♪3)	Eighth-note triplet
1/16. (𝅘𝅥𝅮.)	Dotted sixteenth note
1/8 (♪)	Eighth note
1/4T (♩3)	Quarter-note triplet
1/8. (♪.)	Dotted eighth note
1/4 (♩)	Quarter note
1/2T (𝅗𝅥3)	Half-note triplet
1/4. (♩.)	Dotted quarter note
1/2 (𝅗𝅥)	Half note
1/1T (𝅝3)	Whole-note triplet
1/2. (𝅗𝅥.)	Dotted half note
1/1 (𝅝)	Whole note
2/1T (𝅜3)	Double-note triplet
1/1. (𝅝.)	Dotted whole note
2/1 (𝅜)	Double note

Specifications

ARX-03 BRASS

Maximum Polyphony

14 voices (varies according to the sound generator load)

Parts

1 part

User Memory

Patch: 50 (including pre-loaded data)
(CC#0 = 66, CC#32 = 0, PC = 1–50)

Effects

EQ: 6 systems (1 system par instrument)

MASTER EQ:1 system

Multi-Effects(MFX):1 system, 15 types
STEREO EQ, ENHANCER, AUTO WAH, HEXA-CHORUS, COMPRESSOR, LIMITER, LOFI COMPRESS, TELEPHONE, PHONOGRAPH, TAPE ECHO, GATED REVERB, STEREO DELAY, MODULATION DELAY, TRIPLE TAP DELAY, REVERSE DELAY

Reverb: 1 system, 8 types
ROOM, HALL, PLATE, STUDIO, CHURCH, SRV ROOM, SRV HALL, SRV PLATE

Customize Functions

Stability, Personality, Growl/Turbid, Noise, Control Assign

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* In the interest of product improvement, the specifications and/or appearance of this product are subject to change without prior notice.

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For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.
This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

NOTICE

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

AVIS

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

For the USA

DECLARATION OF CONFORMITY
Compliance Information Statement

Model Name :	ARX-03
Type of Equipment :	Expansion Board
Responsible Party :	Roland Corporation U.S.
Address :	5100 S. Eastern Avenue, Los Angeles, CA 90040-2938
Telephone :	(323) 890 3700

For C.A. US (Proposition 65)

WARNING

This product contains chemicals known to cause cancer, birth defects and other reproductive harm, including lead.

For EU Countries

CE

This product complies with the requirements of EMC Directive 2004/108/EC.

For EU Countries

UK This symbol indicates that in EU countries, this product must be collected separately from household waste, as defined in each region. Products bearing this symbol must not be discarded together with household waste.

DE Dieses Symbol bedeutet, dass dieses Produkt in EU-Ländern getrennt vom Hausmüll gesammelt werden muss gemäß den regionalen Bestimmungen. Mit diesem Symbol gekennzeichnete Produkte dürfen nicht zusammen mit den Hausmüll entsorgt werden.

FR Ce symbole indique que dans les pays de l'Union européenne, ce produit doit être collecté séparément des ordures ménagères selon les directives en vigueur dans chacun de ces pays. Les produits portant ce symbole ne doivent pas être mis au rebut avec les ordures ménagères.

IT Questo simbolo indica che nei paesi della Comunità europea questo prodotto deve essere smaltito separatamente dai normali rifiuti domestici, secondo la legislazione in vigore in ciascun paese. I prodotti che riportano questo simbolo non devono essere smaltiti insieme ai rifiuti domestici. Ai sensi dell'art. 13 del D.Lgs. 25 luglio 2005 n. 151.

ES Este símbolo indica que en los países de la Unión Europea este producto debe recogerse aparte de los residuos domésticos, tal como esté regulado en cada zona. Los productos con este símbolo no se deben depositar con los residuos domésticos.

PT Este símbolo indica que nos países da UE, a recolha deste produto deverá ser feita separadamente do lixo doméstico, de acordo com os regulamentos de cada região. Os produtos que apresentem este símbolo não deverão ser eliminados juntamente com o lixo doméstico.

NL Dit symbool geeft aan dat in landen van de EU dit product gescheiden van huishoudelijk afval moet worden aangeboden, zoals bepaald per gemeente of regio. Producten die van dit symbool zijn voorzien, mogen niet samen met huishoudelijk afval worden verwijderd.

DK Dette symbol angiver, at i EU-lande skal dette produkt opsamles adskilt fra husholdningsaffald, som defineret i hver enkelt region. Produkter med dette symbol må ikke smides ud sammen med husholdningsaffald.

NO Dette symbolet indikerer at produktet må behandles som spesialavfall i EU-land, iht. til retningslinjer for den enkelte regionen, og ikke kastes sammen med vanlig husholdningsavfall. Produkter som er merket med dette symbolet, må ikke kastes sammen med vanlig husholdningsavfall.

SE Symbolen anger att i EU-länder måste den här produkten kasseras separat från hushållsavfall, i enlighet med varje regions bestämmelser. Produkter med den här symbolen får inte kasseras tillsammans med hushållsavfall.

FI Tämä merkintä ilmaisee, että tuote on EU-maissa kerättävä erillään kotitalousjätteistä kunkin alueen voimassa olevien määräysten mukaisesti. Tällä merkinnällä varustettuja tuotteita ei saa hävittää kotitalousjätteiden mukana.

HU Ez a szimbólum azt jelenti, hogy az Európai Unióban ezt a terméket a háztartási hulladéktól elkülönítve, az adott régióban érvényes szabályozás szerint kell gyűjteni. Az ezzel a szimbólummal ellátott termékeket nem szabad a háztartási hulladék közé dobni.

PL Symbol oznacza, że zgodnie z regulacjami w odpowiednim regionie, w krajach UE produktu nie należy wyrzucać z odpadami domowymi. Produktów opatrzonych tym symbolem nie można utylizować razem z odpadami domowymi.

CZ Tento symbol udává, že v zemích EU musí být tento výrobek sbírán odděleně od domácího odpadu, jak je určeno pro každý region. Výrobky nesoucí tento symbol se nesmí vyhazovat spolu s domácím odpadem.

SK Tento symbol vyjadruje, že v krajinách EÚ sa musí zber tohto produktu vykonávať oddelene od domového odpadu, podľa nariadení platných v konkrétnej krajine. Produkty s týmto symbolom sa nesmú vyhadzovať spolu s domovým odpadom.

EE See sümbol näitab, et EL-i maades tuleb see toode olemprügist eraldi koguda, nii nagu on igas piirkonnas määratletud. Selle sümboliga märgitud tooteid ei tohi ära visata koos olmeprügiga.

LT Šis simbolis rodo, kad ES šalyse šis produktas turi būti surenkamas atskirai nuo buitinių atliekų, kaip nustatyta kiekviename regione. Šiuo simboliu paženklinti produktai neturi būti išmetami kartu su buitinėmis atliekomis.

LV Šis simbols norāda, ka ES valstīs šo produktu jāievāc atsevišķi no mājsaimniecības atkritumiem, kā noteikts katrā reģionā. Produktus ar šo simbolu nedrīkst izmest kopā ar mājsaimniecības atkritumiem.

SI Ta simbol označuje, da je treba proizvod v državah EU zbirati ločeno od gospodinjskih odpadkov, tako kot je določeno v vsaki regiji. Proizvoda s tem znakom ni dovoljeno odlagati skupaj z gospodinjskimi odpadki.

GR Το σύμβολο αυτό υποδηλώνει ότι στις χώρες της Ε.Ε. το συγκεκριμένο προϊόν πρέπει να συλλέγεται χωριστά από τα υπόλοιπα οικιακά απορρίμματα, σύμφωνα με όσα προβλέπονται σε κάθε περιοχή. Τα προϊόντα που φέρουν το συγκεκριμένο σύμβολο δεν πρέπει να απορρίπτονται μαζί με τα οικιακά απορρίμματα.

有关产品中所含有害物质的说明

本资料就本公司产品中所含的特定有害物质及其安全性予以说明。

本资料适用于 2007 年 3 月 1 日以后本公司所制造的产品。

环保使用期限

此标志适用于在中国国内销售的电子信息产品，表示环保使用期限的年数。所谓环保使用期限是指在自制造日起的规定期限内，产品中所含的有害物质不致引起环境污染，不会对人身、财产造成严重的不良影响。

环保使用期限仅在遵照产品使用说明书，正确使用产品的条件下才有效。

不当的使用，将会导致有害物质泄漏的危险。

产品中有毒有害物质或元素的名称及含量

部件名称	有毒有害物质或元素					
	铅(Pb)	汞(Hg)	镉(Cd)	六价铬(Cr(VI))	多溴联苯(PBB)	多溴二苯醚(PBDE)
外壳（壳体）	×	○	○	○	○	○
电子部件（印刷电路板等）	×	○	×	○	○	○
附件（电源线、交流适配器等）	×	○	○	○	○	○

○：表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。

×：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T11363-2006 标准规定的限量要求。
因根据现有的技术水平，还没有什么物质能够代替它。

Information

When you need repair service, call your nearest Roland Service Center or authorized Roland distributor in your country as shown below.

AFRICA

EGYPT

Al Fanny Trading Office
9, EBN Hagar Al Askalany Street,
ARD E1 Golf, Heliopolis,
Cairo 11341, EGYPT
TEL: (022)-418-5531

REUNION

Maison FO - YAM Marcel
25 Rue Jules Hermann,
Chaudron - BP79 97 491
Ste Clotilde Cedex,
REUNION ISLAND
TEL: (0262) 218-429

SOUTH AFRICA

T.O.M.S. Sound & Music (Pty)Ltd.
2 ASTRON ROAD DENVER
JOHANNESBURG ZA 2195,
SOUTH AFRICA
TEL: (011)417 3400

Paul Bothner(PTY)Ltd.
Royal Cape Park, Unit 24
Londonderry Road, Ottery 7800
Cape Town, SOUTH AFRICA
TEL: (021) 799 4900

ASIA

CHINA

Roland Shanghai Electronics Co.,Ltd.
5F. No.1500 Pingliang Road
Shanghai 200090, CHINA
TEL: (021) 5580-0800

Roland Shanghai Electronics Co.,Ltd.
(BEIJING OFFICE)
10F. No.18 3 Section Anhuaxili
Chaoyang District Beijing
100011 CHINA
TEL: (010) 6426-5050

HONG KONG

Tom Lee Music Co., Ltd.
Service Division
22-32 Pun Shan Street, Tsuen Wan, New Territories,
HONG KONG
TEL: 2415 0911

Parsons Music Ltd.
8th Floor, Railway Plaza, 39 Chatham Road South, T.S.T, Kowloon, HONG KONG
TEL: 2333 1863

INDIA

Rivera Digitec (India) Pvt. Ltd.
411, Nirman Kendra
Mahalaxmi Flats Compound
Off. Dr. Edwin Moses Road,
Mumbai-400011, INDIA
TEL: (022) 2493 9051

INDONESIA

PT Citra IntiRama
Jl. Cideng Timur No. 15J-15O
Jakarta Pusat
INDONESIA
TEL: (021) 6324170

KOREA

Cosmos Corporation
1461-9, Seocho-Dong,
Seocho Ku, Seoul, KOREA
TEL: (02) 3486-8855

MALAYSIA

Roland Asia Pacific Sdn. Bhd.
45-1, Block C2, Jalan PJU 1/39,
Dataran Prima, 47301 Petaling Jaya, Selangor, MALAYSIA
TEL: (03) 7805-3263

VIET NAM

Suoi Nhac Company, Ltd
370 Cach Mang Thang Tam St.
Dist.3, Ho Chi Minh City,
VIET NAM
TEL: 9316540

PHILIPPINES

G.A. Yupangco & Co. Inc.
339 Gil J. Puyat Avenue
Makati, Metro Manila 1200,
PHILIPPINES
TEL: (02) 899 9801

SINGAPORE

SWEE LEE MUSIC COMPANY PTE. LTD.
150 Sims Drive,
SINGAPORE 387381
TEL: 6846-3676

TAIWAN

ROLAND TAIWAN ENTERPRISE CO., LTD.
Room 5, 9fl. No. 112 Chung Shan N.Road Sec.2, Taipei,
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TEL: (02) 2561 3339

THAILAND

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100-108 Soi Verng Nakornkasem, New Road,Sumpantawongse,
Bangkok 10100 THAILAND
TEL: (02) 224-8821

AUSTRALIA/ NEW ZEALAND

AUSTRALIA/ NEW ZEALAND

Roland Corporation Australia Pty.,Ltd.
38 Campbell Avenue
Dee Why West. NSW 2099
AUSTRALIA

For Australia
Tel: (02) 9982 8266
For New Zealand
Tel: (09) 3098 715

CENTRAL/LATIN AMERICA

ARGENTINA

Instrumentos Musicales S.A.
Av.Santa Fe 2055
(1123) Buenos Aires
ARGENTINA
TEL: (011) 4508-2700

BARBADOS

A&B Music Supplies LTD
12 Webster Industrial Park
Wildey, St.Michael, Barbados
TEL: (246)430-1100

BRAZIL

Roland Brasil Ltda.
Rua San Jose, 780 Sala B
Parque Industrial San Jose
Cotia - Sao Paulo - SP, BRAZIL
TEL: (011) 4615 5666

CHILE

Comercial Fancy II S.A.
Rut.: 96.919.420-1
Nataniel Cox #739, 4th Floor
Santiago - Centro, CHILE
TEL: (02) 688-9540

COLOMBIA

Centro Musical Ltda.
Cra 43 B No 25 A 41 Bododega 9
Medellin, Colombia
TEL: (574)3812529

COSTA RICA

JUAN Bansbach Instrumentos Musicales
Ave.1. Calle 11, Apartado 10237,
San Jose, COSTA RICA
TEL: 258-0211

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Zeelandia Music Center Inc.
Orionweg 30
Curacao, Netherland Antilles
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DOMINICAN REPUBLIC

Instrumentos Fernando Giraldez
Calle Proyecto Central No.3
Ens.La Esperilla
Santo Domingo,
Dominican Republic
TEL:(809) 683 0305

ECUADOR

Mas Musika
Rumichaca 822 y Zaruma
Guayaquil - Ecuador
TEL:(593-4)2302364

EL SALVADOR

OMNI MUSIC
75 Avenida Norte y Final Alameda Juan Pablo II,
Edificio No.4010 San Salvador,
EL SALVADOR
TEL: 262-0788

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Casa Instrumental
Calzada Roosevelt 34-01,zona 11
Ciudad de Guatemala
Guatemala
TEL:(502) 599-2888

HONDURAS

Almacen Pajaro Azul S.A. de C.V.
BO.Paz Barahona
3 Ave.11 Calle S.O
San Pedro Sula, Honduras
TEL: (504) 553-2029

MARTINIQUE

Musique & Son
Z.I.Les Mangle
97232 Le Lamantin
Martinique F.W.I.
TEL: 596 596 426860

Gigamusic SARL
10 Rte De La Folie
97200 Fort De France
Martinique F.W.I.
TEL: 596 596 715222

MEXICO

Casa Veerkamp, s.a. de c.v.
Av. Toluca No. 323, Col. Olivar de los Padres 01780 Mexico D.F. MEXICO
TEL: (55) 5668-6699

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Bansbach Instrumentos Musicales Nicaragua
Altamira D'Este Calle Principal de la Farmacia 5ta.Avenida
1 Cuadra al Lago.#503
Managua, Nicaragua
TEL: (505)277-2557

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SUPRO MUNDIAL, S.A.
Boulevard Andrews, Albrook,
Panama City, REP. DE PANAMA
TEL: 315-0101

PARAGUAY

Distribuidora De Instrumentos Musicales
J.E. Olear y ESQ. Manduvira
Asuncion PARAGUAY
TEL: (595) 21 492147

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Distribuciones Musicales SAC
Juan Fanning 530
Miraflores
Lima - Peru
TEL: (511) 4461388

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Ground Floor
Maritime Plaza
Barataria Trinidad W.I.
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Todo Musica S.A.
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Montevideo, URUGUAY
TEL: (02) 924-2335

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Instrumentos Musicales Allegro,C.A.
Av.las industrias edf.Guitar import
#7 zona Industrial de Turumo
Caracas, Venezuela
TEL: (212) 244-1122

EUROPE

AUSTRIA
Roland Elektronische Musikinstrumente HmbH.
Austrian Office
Eduard-Bodem-Gasse 8,
A-6020 Innsbruck, AUSTRIA
TEL: (0512) 26 44 260

BELGIUM/FRANCE/ HOLLAND/ LUXEMBOURG
Roland Central Europe N.V.
Houtstraat 3, B-2260, Oevel (Westerlo) BELGIUM
TEL: (014) 575811

CROATIA
ART-CENTAR
Degenova 3.
HR - 10000 Zagreb
TEL: (1) 466 8493

CZECH REP.
CZECH REPUBLIC DISTRIBUTOR s.r.o
Voctárova 247/16
CZ - 180 00 PRAHA 8,
CZECH REP.
TEL: (2) 830 20270

DENMARK
Roland Scandinavia A/S
Nordhavnsvej 7, Postbox 880,
DK-2100 Copenhagen
DENMARK
TEL: 3916 6200

FINLAND
Roland Scandinavia As, Filial Finland
Elannontie 5
FIN-01510 Vantaa, FINLAND
TEL: (0)9 68 24 020

GERMANY
Roland Elektronische Musikinstrumente HmbH.
Oststrasse 96, 22844
Norderstedt, GERMANY
TEL: (040) 52 60090

GREECE/CYPRUS
STOLLAS S.A.
Music Sound Light
155, New National Road
Patras 26442, GREECE
TEL: 2610 435400

HUNGARY
Roland East Europe Ltd.
Warehouse Area 'DEPO' Pf.83
H-2046 Torokbalint,
HUNGARY
TEL: (23) 511011

IRELAND
Roland Ireland
G2 Calmount Park, Calmount Avenue, Dublin 12
Republic of IRELAND
TEL: (01) 4294444

ITALY
Roland Italy S. p. A.
Viale delle Industrie 8,
20020 Arese, Milano, ITALY
TEL: (02) 937-78300

NORWAY
Roland Scandinavia Avd.
Kontor Norge
Lilleakerveien 2 Postboks 95
Lilleaker N-0216 Oslo
NORWAY
TEL: 2273 0074

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ROLAND POLSKA SP. Z O.O.
UL. Gibraltarska 4.
PL-03 664 Warszawa
POLAND
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Roland Iberia, S.L.
Portugal Office
Cais das Pedras, 8/9-1 Dto
4050-465, Porto, PORTUGAL
TEL: 22 608 00 60

ROMANIA
FBS LINES
Piata Libertatii 1,
535500 Gheorgheni,
ROMANIA
TEL: (266) 364 609

RUSSIA
MuTek
Dorozhnaya ul.3,korp.6
117 545 Moscow, RUSSIA
TEL: (095) 981-4967

SLOVAKIA
DAN Acoustic s.r.o.
Povazská 18.
SK - 940 01 Nové Zámky
TEL: (035) 6424 330

SPAIN
Roland Iberia, S.L.
Paseo García Faria, 33-35
08005 Barcelona SPAIN
TEL: 93 493 91 00

SWEDEN
Roland Scandinavia A/S
SWEDISH SALES OFFICE
Danvik Center 28, 2 tr.
S-131 30 Nacka SWEDEN
TEL: (0)8 702 00 20

SWITZERLAND
Roland (Switzerland) AG
Landstrasse 5, Postfach,
CH-4452 Itingen,
SWITZERLAND
TEL: (061) 927-8383

UKRAINE
EURHYTHMICS Ltd.
P.O.Box: 37-a.
Nedecey Str. 30
UA - 89600 Mukachevo,
UKRAINE
TEL: (03131) 414-40

UNITED KINGDOM
Roland (U.K.) Ltd.
Atlantic Close, Swansea Enterprise Park, SWANSEA
SA7 9FJ,
UNITED KINGDOM
TEL: (01792) 702701

MIDDLE EAST

BAHRAIN
Moon Stores
No.1231&1249 Rumaytha Building Road 3931, Manama 339 BAHRAIN
TEL: 17 813 942

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MOCO INC.
No.41 Nike St., Dr.Shariyati Ave., Roberoye Cerahe Mirdamad
Tehran, IRAN
TEL: (021)-2285-4169

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Halilit P. Greenspoon & Sons Ltd.
8 Retzif Ha'alia Hashnia St.
Tel-Aviv-Yafo ISRAEL
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MUSIC HOUSE CO. LTD.
FREDDY FOR MUSIC
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Amman 11192 JORDAN
TEL: (06) 5692696

KUWAIT
EASA HUSAIN AL-YOUSIFI & SONS CO.
Al-Yousifi Service Center
P.O.Box 126 (Safat) 13002
KUWAIT
TEL: 00 965 802929

LEBANON
Chahine S.A.L.
George Zeidan St., Chahine Bldg., Achrafieh, P.O.Box: 16-5857
Beirut, LEBANON
TEL: (01) 20-1441

OMAN
TALENTZ CENTRE L.L.C.
Malatan House No.1
Al Noor Street, Ruwi
SULTANATE OF OMAN
TEL: 2478 3443

QATAR
Al Emadi Co. (Badie Studio & Stores)
P.O. Box 62, Doha, QATAR
TEL: 4423-554

SAUDI ARABIA
aDawliah Universal Electronics APL
Behind Pizza Inn
Prince Turkey Street
aDawliah Building,
PO BOX 2154,
Alkhobar 31952
SAUDI ARABIA
TEL: (03) 8643601

SYRIA
Technical Light & Sound Center
Rawda, Abdul Qader Jazairi St.
Bldg. No. 21, P.O.BOX 13520,
Damascus, SYRIA
TEL: (011) 223-5384

TURKEY
ZUHAL DIS TICARET A.S.
Galip Dede Cad. No.37
Beyoglu - Istanbul / TURKEY
TEL: (0212) 249 85 10

U.A.E.
Zak Electronics & Musical Instruments Co. L.L.C.
Zabeel Road, Al Sherooq Bldg., No. 14, Ground Floor, Dubai, U.A.E.
TEL: (04) 3360715

NORTH AMERICA

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Roland Canada Ltd.
(Toronto Office)
170 Admiral Boulevard
Mississauga On L5T 2N6
CANADA
TEL: (905) 362 9707

U. S. A.
Roland Corporation U.S.
5100 S. Eastern Avenue
Los Angeles, CA 90040-2938,
U. S. A.
TEL: (323) 890 3700

As of Oct. 1, 2007 (ROLAND)

Roland Corporation